Notice of Allowability	Application No. 09/970,613	Applicant(s) HOLST ET AL.	
	Examiner Tom P. Duong	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *8/23/05*.

2. ☒ The allowed claim(s) is/are *71-76,78,79 and 111-126*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Mr. Steven M. Santisi and Mr. Donald Marshall III on November 2, 2005.

The application has been amended as follows:

In the specification:

Prior to the first paragraph of page 1 of the specification, insert the following paragraph: --This application is a division of U.S. Application No. 09/400,662 filed on December 04, 2000, now Patent No. 6,333,010, which is a continuation of 08/775,838 filed on December 31,1996, now Patent No. 5,955,037.

In the claims:

1-70. (Canceled).

71. (Currently Amended) An apparatus for treating an effluent fluid stream from one or more semiconductor manufacturing process tools, comprising:

a pre-treatment unit, downstream from at least one semiconductor manufacturing process tool, arranged to remove water soluble components from the effluent fluid stream;

an oxidizing unit, downstream from the pre-treatment unit, arranged to elevate the temperature of the effluent fluid stream, utilize a hydrogen source to effect destruction of at least a portion of halogen-containing components of the effluent fluid stream and effect oxidation of at least a portion of the oxidizable components of the effluent fluid stream; and

a quench unit, downstream from the oxidizing unit, arranged to lower the temperature of the effluent fluid stream, wherein water vapor from the quench unit is recycled

back to the oxidizing unit for utilization as a hydrogen source to effect destruction of at least portion of the halogen-containing components of the effluent fluid stream; and

a post-treatment unit, downstream from the ~~oxidizing unit~~ quench unit, arranged to remove acidic components from the effluent fluid stream.

72. (Previously Presented) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 71, wherein said halogen-containing components contain fluorine.

73. (Previously Presented) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 71, wherein said halogen-containing components contain chlorine.

74. (Previously Presented) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 71, wherein said halogen-containing components comprise perfluorocarbons.

75. (Previously Presented) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 71, wherein the pre-treatment unit is arranged to remove particulates from the effluent fluid stream.

76. (Previously Presented) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 71, wherein the post-treatment unit is arranged to remove particulates from the effluent fluid stream.

77. (Canceled)

78. (Currently Amended) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim ~~77~~ 71, wherein the quench unit is constructed using a corrosion-resistant alloy.

79. (Previously Presented) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 71, wherein the oxidation unit is constructed using a high temperature oxidation-resistant alloy.

80-110. (Canceled).

111. (Previously Presented) An apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools, comprising:

an oxidizing unit, downstream from at least one semiconductor manufacturing process tool, arranged to elevate the temperature of the effluent fluid stream, utilize a hydrogen source to effect destruction of at least a portion of the halogen-containing components of the effluent fluid stream and effect oxidation of at least a portion of the oxidizable components of the effluent fluid stream;

a post-treatment unit, downstream from the oxidizing unit, arranged to remove acidic components from the effluent fluid stream; and,

a quench unit, downstream from the oxidizing unit and upstream from the post-treatment unit, arranged to lower the temperature of the effluent fluid stream, wherein water vapor from the quench unit is recycled back to the oxidizing unit for utilization as a hydrogen source to effect destruction of at least portion of the halogen-containing components of the effluent fluid stream.

112. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, wherein said halogen-containing components contain fluorine.

113. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, wherein said halogen-containing components contain chlorine.

114. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, wherein said halogen-containing components comprise perfluorocarbons.

115. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, further comprising a pre-treatment unit arranged to remove particulates from the effluent fluid stream.

116. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, further comprising a post-treatment unit arranged to remove particulates from the effluent fluid stream.

117. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, wherein the quench unit is constructed using a corrosion-resistant alloy.

118. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 111, wherein the oxidation unit is constructed using a high temperature oxidation-resistant alloy.

119. (New) An apparatus for treating an effluent fluid stream from one or more semiconductor manufacturing process tools, comprising:

an oxidizing unit arranged to elevate the temperature of the effluent fluid stream, utilize a hydrogen source to effect destruction of at least a portion of halogen-

containing components of the effluent fluid stream and effect oxidation of at least a portion of the oxidizable components of the effluent fluid stream; and

a quench unit, downstream from the oxidizing unit, arranged to lower the temperature of the effluent fluid stream, wherein water vapor from the quench unit is recycled back to the oxidizing unit for utilization as a hydrogen source to effect destruction of at least portion of the halogen-containing components of the effluent fluid stream.

120. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, wherein said halogen-containing components contain fluorine.

121. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, wherein said halogen-containing components contain chlorine.

122. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, wherein said halogen-containing components comprise perfluorocarbons.

123. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, further comprising a pre-treatment unit arranged to remove particulates from the effluent fluid stream.

124. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, further comprising a post-treatment unit arranged to remove particulates from the effluent fluid stream.

125. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, wherein the quench unit is constructed using a corrosion-resistant alloy.

126. (New) The apparatus for treating the effluent fluid stream from one or more semiconductor manufacturing process tools of claim 119, wherein the oxidation unit is constructed using a high temperature oxidation-resistant alloy.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TD
November 3, 2005
TD

Glenn Caldarola
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